

WHAT IS CLAIMED IS:

1. A thin film transistor comprising a gate electrode, a gate insulation film, a source electrode, a drain electrode, a semiconductor film and a protection film, stacked on a substrate, wherein the semiconductor film is composed of an aggregate of organic semiconductor molecules, and the organic semiconductor molecules of the semiconductor film formed in a gate electrode-projected region on a surface of the insulation film have a higher orientation order than that of the semiconductor film formed outside the region.
2. The thin film transistor according to claim 1, wherein a self assembled monolayer film exists in an interface between the semiconductor film formed on the surface of the insulation film in the gate electrode-projected region and the insulation film, but does not exist in an interface between the semiconductor film formed outside the region and the insulation film.
3. The thin film transistor according to claim 1, wherein drain/source electrodes are made of a metal, a metallic oxide or an electroconductive polymer, which can form a liquid material upon dispersed in a solvent in a form of ultra-fine particles, a complex or a high polymer, and are arranged self-aligned with the gate electrode.
4. The thin film transistor according to claim 1, wherein an anodic oxide film on the gate electrode

is used as the insulation film, and a space between the drain/source electrodes is narrower than a width of the gate electrode.

5. The thin film transistor according to claim 1, wherein a monolayer film including a carbon chain partly terminated with a fluorine or hydrogen atom is used as the self assembled monolayer film.

6. A method for manufacturing the thin film transistor according to claim 1, which comprises the step of removing the self assembled monolayer film formed on the surface of the insulation film from the region outside the gate electrode-projected region, in which the semiconductor film is formed, by irradiating the self assembled monolayer film with a light from a surface side of the substrate through a photomask.

7. A method for manufacturing the thin film transistor according to claim 1, which comprises the step of removing the self assembled monolayer film formed on the surface of the insulation film from the region outside the gate electrode-projected region, in which the semiconductor film is formed, by irradiating the self assembled monolayer film with a light from a back side of the substrate while using a gate electrode as a photomask.

8. A method for manufacturing the thin film transistor according to claim 1, which comprises the step of selectively transferring the self assembled monolayer film only onto the gate electrode-projected

region, by pressing the self assembled monolayer film coated on a smooth substrate to the surface of the insulation film, by making use of a step between the gate electrode-projected region of the surface of the insulation film and any other region.

9. A method for manufacturing the thin film transistor according to claim 2, which comprises the steps of applying an electroconductive ink of a liquid material including at least one of metallic microparticles, a metallic complex or an electroconductive polymer around the self assembled monolayer film formed in the gate electrode-projected region on the surface of the insulation film and burning the applied ink to form source/drain electrodes, and sequentially forming thereon layers of the semiconductor film and a protection film.

10. A method for manufacturing the thin film transistor according to claim 1, which comprises the step of irradiating the semiconductor film formed outside the gate electrode-projected region on the surface of the insulation film with a light having a wavelength transmitting the substrate and the insulation film but absorbed by the semiconductor film, to lower the orientation order of the semiconductor film.

11. An active matrix type thin film transistor substrate having several gate electric bus lines, the insulation film, several signal bus lines intersecting

with the gate electric bus lines in a matrix form, a protection film and a pixel electrode, wherein the thin film transistors according to claim 1 are disposed at intersections of the several gate electric bus lines with the several signal bus lines, the gate electric bus line is connected to the gate electrode, the signal bus line is connected to the drain electrode, and the pixel electrode is connected to the source electrode.

12. An active matrix drive display device comprising the active matrix type thin film transistor substrate according to claim 11, and a liquid crystal element as a display element.